

Disparity Society Theory and Social Stratification Theory: An Attempt to Respond to Challenges by Disparity Society Theory*

**Yoshimichi Sato
(Tohoku University)**

Abstract

This paper explores the empirical validity of two important issues recently highlighted by disparity society theory in Japan. The first is income disparity and disparity between regular and non-regular workers. It is clear that social stratification theory has not yet analyzed these issues seriously. It has studied occupations rather than income; it has implicitly assumed that workers have regular jobs. The second issue is recent cross-strata increases in disparity. This paper studies the effect of employment status – regular employment versus non-regular employment – on income by analyzing data produced by Japan's Social Stratification and Social Mobility Surveys. A regression analysis is applied to the data, with logarithmic income as the dependent variable, and occupation and employment status as independent variables. The result shows that employment status has stronger explanatory power than that of occupation, as argued by discrepancy society theory. To check the empirical validity of the claim that cross-strata disparity is on the increase, this paper compares partial regression coefficients of two regression models using the survey data from 1995 and 2005. The result of the comparison shows that the coefficient of regular employment had become smaller from 1995 to 2005. This means that income disparity between Japanese regular and non-regular workers had shrunken over the decade. It would be risky to argue that income disparity is on the decline based only on this result. A fruitful dialog between disparity society theory and social stratification theory is needed to better comprehend income disparity.

Keywords and phrases: Income disparity, employment status, growing disparity

1 Challenges against Social Stratification Theory by Disparity Society Theory

In recent years, a large number of books and papers on the widening disparities in society have attracted much public attention. But for a few exceptions including Sato (2000) and Kariya (2001), researchers specializing in social stratification theory and social mobility analysis have not very often debated social disparities. For these researchers, the existence of disparities in society is so self-evident that it is difficult to understand why

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disparity society theory attracts so much attention from the general public. However, arguments by disparity society theory do deserve interest. In this paper, I take these arguments as challenges to conventional social stratification theory and social mobility analysis and attempt to respond to some of the hotly debated issues.

2 Social Stratification Theory and Social Mobility Analysis

The crux of social stratification theory and social mobility analysis highlights major differences between them and disparity society theory. Social stratification theory assumes that socially desirable resources are distributed unequally among several social groups. Put succinctly, the fundamental questions in social stratification theory consist of: a descriptive question of ‘how unequal the distribution is’; and an explanatory question of ‘why such inequality exists’. While economists assume that money is the main desirable resource and tend to focus on the Gini coefficient and other tools to measure income inequality, specialists in social stratification study use such concepts as occupational strata and educational strata, and focus more on occupation and education than on income. Although occupation is a means to make income, there are desirability ratings of occupations themselves. In social stratification theory, the desirability of occupations is expressed using the concept of occupational prestige. The theory also assumes that each person attempts to get a job with higher prestige. The index for measuring occupational prestige is calculated based on social surveys. Specifically, various occupations (such as president of a large company, carpenter, or kindergarten teacher) are presented to respondents, who are requested to state their evaluations of these occupations (very high, fairly high, moderate, fairly low, or very low). These answers are quantified and aggregated to calculate the index of occupational prestige.

Needless to say, there are a large number of different occupations in the world. This has prompted the construction of occupational classification that categorizes occupations according to occupational prestige, lifestyle, and so on. An example of often-used categorization is the one that classifies the population into eight groups: professional (physicians, teachers, musicians, etc.); managerial (members of the national assembly, company presidents, postmasters, etc.); clerical (general/planning clerks, reception/desk clerks, accounting clerks, etc.); sales (shopkeepers, restaurant managers, shop assistants, etc.); skilled (automobile assemblers/mechanics, cooks, shipbuilders, etc.); semi-skilled (train drivers/locomotive engineers, conductors, metal welders, etc.);

unskilled (road workers, freight workers, cleaners, etc.); and farming (agricultural/silk-raising farmers, forestry workers, fishery workers, etc.) (Tominaga 1979). Certainly, this is not the only way to stratify society. Other stratification theories can include the schema with two major classes – the working class and the capitalist class – proposed by the classical Marxist class theory, and Wright’s (1978) schema that incorporates white-collar workers as an intermediary position in the Marxist’s schema.

Why, then, are socially desirable resources distributed unequally? A Marxist response to this question focuses on the relationship between the classes. The basic idea is that the ruling class exploits the ruled class, and this exploitation results in the unequal distribution of wealth. Meanwhile, Becker’s (1993) human capital theory, one of the theories of modern economics, maintains that difference in wages between two workers results from their contrasting differences in human capital, including education and work experience. Differences in human capital result in differences in productivity, which in turn result in differences in wages. In addition, in Doeringer and Piore’s (1971) internal labor market analysis and Odaka’s (1984) dual labor market theory, even in the same occupation whether a worker is at the core or in the periphery of the labor market would make differences in wages, fringe benefits, and job security. Within sociology, social stratification theory uses these ideas in analysis of social stratification and social mobility but differs from these theories in its attempts to answer the following questions from the viewpoint of intergenerational mobility: ‘Why do some people enter the working class while others enter the capitalist class?’, ‘Why do some people go on to university while others do not?’, and ‘Why can some people enter the internal labor market while others cannot?’.

Intergenerational mobility references stratum mobility across generations. For instance, in terms of the aforementioned eight occupational categories if a teacher’s child becomes a company president, this would mean a shift from the professional to the managerial stratum. If the child becomes an automobile assembler, this would mean a shift from the professional to the skilled stratum. The child may of course enter the professional stratum. He/she may enter the professional stratum not just as a teacher but also as a lawyer or photographer. In legal terms, freedom of choice in employment is guaranteed to all. This is, however, a guarantee only in the eye of the law. In reality, disparities of opportunity exist in intergenerational mobility. Put simply, a child is more likely to enter the same stratum as his/her parent(s) than any other stratum. In past, most of these cases were attributable to family business succession which occurred directly

from parents to their children. However, with increasing numbers of workers having become employees and the self-employed sector having reduced in size, the effect of education has become more powerful. In other words, under the current status attainment process, any given parents' social stratum affects their children's stratum through education.

Modernization theory, on the other hand, argues that as society becomes modernized, people should come to obtain employment based not on their origin but on their performance. This is because if a company selects its employees based on their parents' social stratum, not all of them would be of superior quality, resulting in reduced competitiveness of the company. Even a person from a low stratum should be able to enter a higher stratum if he/she can attain advanced education by his/her own talent and effort. One of the major objectives of social mobility analysis is to empirically verify this meritocratic argument. Contrary results, however, have been found in international comparisons and time-series analyses of intergenerational mobility conducted by a number of researchers. Observation of the mobility patterns (pure mobility) has been obtained after controlling for the effect of industrial and occupational structures and changes to them. This has revealed no difference in the level of pure mobility among societies that have achieved a certain level of industrialization. For sociological modernization theory, higher levels of pure mobility should be found in more modernized societies. Yet empirical evidence shows this is not the case. One possible reason for this is the disparities in educational attainment among different social strata. Hara and Seiyama (1999) calculated high school advancement rates and university advancement rates by stratum of origin and showed that, while the disparities in high school advancement rates were rapidly reduced, the disparities in university advancement rates by stratum were not reduced. Thus, different stratum origins are associated with different levels of educational attainment which, in turn, would affect occupational attainment.

Social stratification theory and social mobility analysis have therefore focused mainly on a person's stratum or class, based on his/her current occupation, and have investigated the level of association between his/her own stratum/class and his/her parent's stratum/class. These researchers have analyzed the process of his/her entry to his/her own stratum/class on the basis of quantified empirical data. This research strategy has several limitations, which seem to have been the focus of attention of disparity society theory. The following section will provide a detailed analysis of this point.

3 Two Challenges by Disparity Society Theory

While disparity society theory has a number of variations, it has challenged the above-described social stratification theory and social mobility analysis in two common respects. First, disparity society theory has pointed out the significance of income disparity. Second, it has focused on disparities between regular and non-regular employment. Other significant points raised by disparity society theory include age disparities, regional disparities, and increasing non-regular employment. However, age disparities are related to the disparity between regular and non-regular employment. Similarly, from the viewpoint of social stratification theory, regional disparities are absorbed into other factors determining inequality. Furthermore,, increasing non-regular employment would pose no problem to society if workers in non-regular employment were given equal treatment to those in regular employment. It would be a social problem only if significant disparities in wages, fringe benefits, etc. existed between regular and non-regular employees.

In this regard, social stratification theory, particularly social mobility analysis, has sought to elucidate the processes through which a person moves from his/her parent's stratum to his/her own stratum (particularly occupational stratum). This is true in both status attainment process model and mobility-table analysis. Where income issues have fallen under the jurisdiction of economists, social stratification theory has never focused on them, with a very few exceptions such as Kanomata (2001). Researchers studying social stratification have seldom participated in arguments about the increasing Gini coefficient. In other words, social stratification theory has not responded properly to the first challenge by disparity society theory. What about the second challenge by disparity society theory? Social stratification theory and social mobility analysis have focused mainly on social stratum and social class. They have used social stratum or social class as an analytical concept when discussing stratum structure or class structure or when analyzing intergenerational or intra-generational mobility. These analyses have implicitly assumed that all workers are in regular employment. The National Survey of Social Stratification and Social Mobility (henceforth, SSM Survey) has been conducted every ten years since 1955. In it, the above assumption was not misguided until 1975, as the survey subjects were men only. However, after the survey subjects were expanded to include women beginning 1985, it became necessary to take workers in non-regular

employment into consideration. Even so, researchers only took up issues related to female workers in non-regular employment and paid scant attention to the existence of male workers in non-regular employment. From young part-timers to middle-aged male part-timers, issues related to male workers in non-regular employment should no longer be ignored. As shown in Figure 1, the proportion of casual/daily employment has increased in both men and women since around 1995.

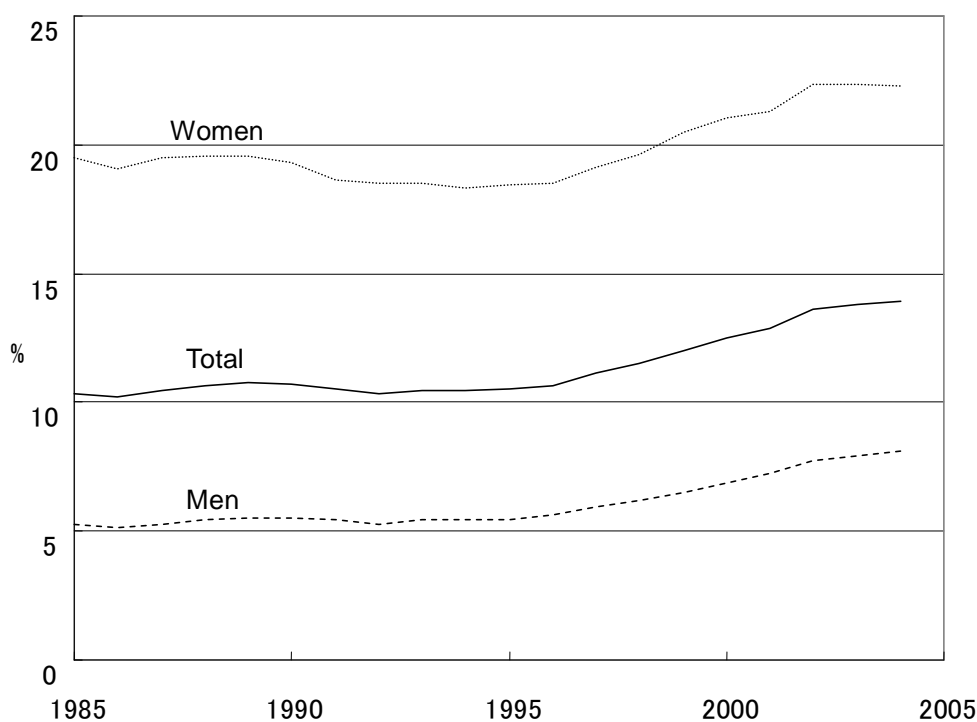


Figure 1 Proportion of Casual/Daily Workers

Source: Labor Force Survey

The conventional stratum/class schema fails to address the disparities between regular and non-regular employment properly because social stratification studies often conduct analyses using occupational strata. For instance, using the above-described eight occupational strata (which are known as the SSM Classification), these studies analyze the distribution of people across, or the intergenerational or intra-generational mobility across, these strata. Such analyses are based on an assumption that people in the same occupational stratum have similar life chances, similar values, and similar consciousness. They also assume that different strata are associated with different ranks of prestige and income. On the other hand, class studies, as mentioned above, use the two major classes (capitalists and workers) which are distinguished by the ownership of the means of

production (as is the case with the classical Marxist view) or, alternatively, classes that categorize people based on control and autonomy at the site of production (Wright, 1978). In these studies, class is defined based on the relations between social groups in one way or another. These stratum/class schemas are not capable of properly detecting differences between workers in regular employment and those in non-regular employment. For instance, part-time university teachers and full-time lawyers, both of whom are in the same professional stratum, would have significantly different life chances due to the significant difference in income. Similarly, in the unskilled stratum, unskilled workers getting jobs through contractors and those in regular employment would be in a sort of ‘class conflict’ situation because the former workers’ low wages secure the latter’s high wages.

Thus, it would be necessary to treat the employment status of regular or non-regular employment in the same manner as stratum/class is treated as a factor generating inequality (in income, etc.). From the eyes of social stratification theorists, this is what is argued by disparity society theory in its challenge to social stratification theory. Certainly, it is logically possible to incorporate employment status into the stratum schema as an additional dimension in the strata, by considering it as a factor generating differences in income or prestige. However, conventional social stratification theory has not practically done so, because it has implicitly assumed that all workers are in regular employment. Therefore, apart from whether the stratum schema should be expanded to include employment status, we must attach employment status the same importance as we have done to occupation.

This paper conducts two analyses of income in response to the two challenges by disparity society theory described above. The first analysis compares the degrees to which stratum and employment status defines income when both are included in the model simultaneously. The second analysis investigates whether or not the disparities in income so defined are widening, based on the argument presented by disparity society theory that the disparities are widening.

4 Data

The data used are from the SSM Surveys conducted in 1995 and 2005¹. The subjects of these surveys were men and women, aged between 20 and 69 and living in all parts of

¹ Use of the data has been approved by the 2005 SSM Research Committee.

Japan. These surveys inquired in detail about the subjects' occupation and occupational history. The 1995 survey used two types of questionnaire, A and B. For both questionnaires, the planned sample size was 2016 persons for each sex. Data were collected from 1248 men and 1405 women for Questionnaire A and from 1242 men and 1462 women for Questionnaire B. The response rates were 61.9%, 69.7%, 61.9% and 72.5%, respectively, after invalid cases were excluded. In the 2005 survey, the planned sample size was 14140 and 5746 cases were collected. The response rate calculated after excluding invalid cases was 44.1%².

The aforementioned SSM Classification was applied to the categorization of occupations. In the actual survey, respondents were requested to answer open questions about their occupations. After the answers were collected, occupational codes (a slightly less than 200 codes) were assigned to the unrestricted answers. The SSM Classifications were created by compiling these codes from the professional to the farming categories, as described above.

In the SSM Surveys, annual income was inquired into not in actual amount but in brackets (for example, 'between 4 million or more and under 4.5 million yen'). In this paper, the middle value of each bracket (in the above example, 4.25 million yen) is used as a proxy for actual amount. For comparison purposes between 1995 and 2005, income was adjusted for consumer price level changes, with 1995 treated as the reference year.

5 Does Class Count?

Erik Olin Wright, a leading authority on class analysis, published a book titled *Class Counts* (1997). This book suggests that class is a very powerful variable to explain various social phenomena. A similar argument has been presented in Japan by Kenji Hashimoto (2001). Most researchers specialising in stratification/class studies, including Wright and Hashimoto, assume that stratification/class is an important explanatory factor. These researchers use stratum/class to explain stratum/class identification and party support or use parental stratum/class to explain children's educational attainment.

How well can stratification/class explain income? An analysis of income using data from the 2005 SSM Survey will address this question. As a preliminary analysis, income levels are stratified into quartiles, and the proportions of subjects in the highest quartile (the highest income group) between the professional and the skilled strata under

² The data from the 2005 SSM Survey are based on the third version (distributed on July 12, 2007).

the SSM Classification are compared on the bases of regular employment and non-regular employment (Figure 2). As shown in Figure 2, the proportion of subjects in the highest quartile is higher in the professional than the skilled stratum for both regular and non-regular employment. However, the difference in the proportion of these subjects is much larger between regular and non-regular employment in the same occupational stratum than between the professional and the skilled strata. This figure demonstrates that income is more strongly determined by employment status than stratification/class³.

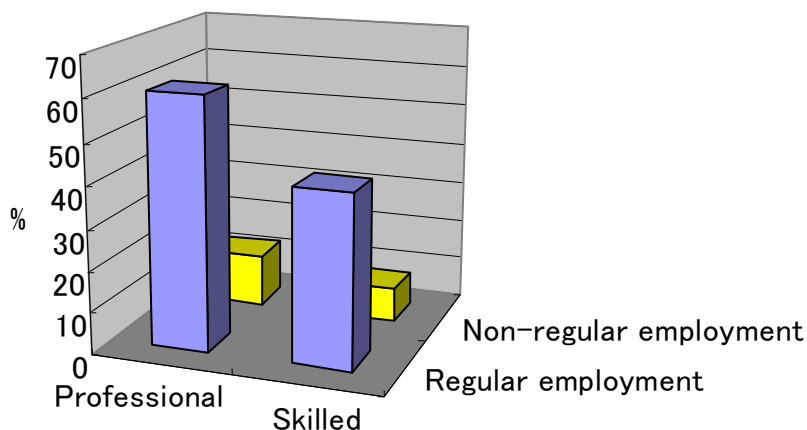


Figure 2 Proportion of Persons in the Highest Quartile by Occupation and by Employment Status

Source: The 2005 SSM Survey in Japan Data

In order to make a more precise analysis of this phenomenon, a multiple regression analysis was conducted, where the dependent variable was income (logarithmic income) and the independent variables were current occupation in terms of occupational stratification (with sales serving as the reference category under the SSM Classification), employment status (with non-regular employment serving as the reference category), sex, and age. The regression formula was:

$$\ln(y) = b_0 + b_1 \text{ female} + b_2 \text{ age} + b_3 \text{ employer} + b_4 \text{ regular employment} + b_5 \text{ self-employed} + b_6 \text{ professional} + b_7 \text{ managerial} + b_8 \text{ clerical} + b_9 \text{ skilled}$$

³ It would be a more precise analysis to use wage rather than income in order to study the discrepancies between regular and non-regular employment. However, wage per hour, week, or month is difficult to measure in the SSM project. Thus we use income instead of wage.

$$+ b_{10} \text{ semi-skilled} + b_{11} \text{ unskilled} + b_{12} \text{ farming} + e \quad (1)$$

where y is income and $\ln(y)$ is its natural logarithm. Terms b_0 through b_{12} are partial regression coefficients (PRCs) and e is an error term. Female is a dummy variable (male = 0, female = 1). If b_1 is a positive number, women's income would be $\exp(b_1)$ times as much as men's⁴ (\exp represents the base of natural logarithm). If b_1 is a negative number, men's income would be $1/\exp(b_1)$ times as much as women's. Age is actual age in years. Therefore, if b_2 is a positive number, older people would have higher income. Employment status is a dummy variable with non-employment serving as the reference category. Therefore, if b_4 is a positive number, regular employees' income would be $\exp(b_4)$ times as much as non-regular employees'. Occupation is a dummy variable with sales serving as the reference category. If, for instance, b_6 is a positive number, professional workers' income would be $\exp(b_6)$ times as much as sales workers'. If b_6 is a negative number, sales workers' income would be $1/\exp(b_6)$ times as much as professional workers'.

Results of the analysis are summarized in Table 1. If we look at the results for employment status, we see that the PRC for regular employees is 0.755. This is statistically significant at 1% level⁵. This means that, when the other variables are controlled for, regular employees' income would be 2.13 ($= \exp(0.755)$) times as much as non-regular employees'.

⁴ Suppose y_1 and y_2 represent women's and men's income, respectively. If the values of all other variables are equal, the following calculation holds:

$$\begin{aligned} \ln(y_1) - \ln(y_2) &= b_1 \\ \ln(y_1/y_2) &= b_1 \\ y_1/y_2 &= \exp(b_1) \\ y_1 &= \exp(b_1) y_2 \end{aligned}$$

If b_1 is a positive number, $\exp(b_1)$ would be larger than unity. In this case, women's income would be $\exp(b_1)$ times as much as men's, as shown in the above formula. If b_1 is a negative number, $\exp(b_1)$ would be smaller than unity. The above formula can be converted into $y_2 = y_1/\exp(b_1)$. This means that men's income would be $1/\exp(b_1)$ times as much as women's (where $1/\exp(b_1)$ is larger than unity).

⁵ In all social surveys, including the SSM Surveys, data are of sampled subjects and not of all members of the society. It is thus necessary to verify whether an analysis based on sampled data applies to the society at large. This verification is known as statistical testing. In the present testing, it is tested that the PRC is not zero for the general population (Japanese society at large) either. Being 'statistically significant at 1% level' means that the hypothesis that 'the PRC for the population is zero' is rejected with a probability of 99%. Therefore, an independent variable with the statistically significant PRC would affect income in the general population as well.

Table 1 Results of a Multiple Regression Analysis with Logarithmic Income as the Dependent Variable
(Source: The 2005 SSM Survey in Japan Data)

Age	0.007 **
Female	-0.776 **
Employment status (reference: non-regular employment)	
Employer	0.830 **
Regular employment	0.755 **
Self-employed	0.310 **
Occupational strata (reference: sales)	
Professional	0.417 **
Managerial	0.452 **
Clerical	0.198 **
Skilled	-0.046
Semi-skilled	-0.114 **
Unskilled	-0.155 **
Farming	-0.058
Constant	5.028 **
Adjusted R^2	0.520
N	3417

As for the effects of current occupation when sales serves as the reference category, the PRCs for professional, managerial, and clerical are positive and are significant at 1% level. On the other hand, the PRCs for skilled, semi-skilled, unskilled, and farming are negative, with those for semi-skilled and unskilled being significant at 1% level. These results indicate that income disparities exist between white-collar occupations (professional, managerial, and clerical) and blue-collar occupations and that, in terms of income level, sales is similar to skilled and farming.

Let us go back to the first opening question and examine whether income is more strongly affected by stratum (in terms of SSM Classification for the purpose of our analysis here) or employment status (non-regular employment vs. regular employment). The PRCs for different occupational strata vary from -0.155 (unskilled) to 0.452 (managerial), with difference lying between the minimum and maximum values at 0.607. On the other hand, the difference between the PRCs for non-regular employment and regular employment statuses is 0.755, as shown above. These results show that income level is affected more by employment status than by current occupation. From these results, it would be fair to say that disparity society theory is correct in its assertion that a disparity exists between regular employment and non-regular employment. Conventional social stratification theory and social mobility analysis use occupation-based concepts of stratum or class. As a determinant of income, however, employment status is more

powerful than these concepts. Researchers specializing in these conventional theories should be willing to reflect on their failure to recognize the significance of employment status.

Disparity society theory has made another point that disparities have widened in recent years. Typical researchers making this point include Tachibanaki (1998), who demonstrated an increase in the Gini coefficient, and Sato (2000), who showed an increase in the closure of the upper white-collar stratum. The next section examines the empirical validity of the argument that disparities are widening.

6 Have Disparities Widened?

To begin from the conclusion, we cannot say that the disparities have widened as long as based on the 1995 and 2005 SSM Survey data. A provisional calculation by Hiroshi Ishida and Satoshi Miwa, members of the SSM research project, demonstrated there was no change from 1995 to 2005 in intergenerational mobility between parent and child generations in terms of relative mobility or pure mobility (i.e. intergenerational mobility after controlling for industrial and occupational structures). The decade in question saw various social changes, including the collapse of lifetime employment, the introduction of merit systems, and an increase of non-regular employment. However, the relative mobility pattern shows no change in the association between parents' and children's occupations. According to the same provisional calculation, the odds ratio for the upper white-collar employees discussed by Sato (2000) in his book *Fubyōdō shakai Nippon* (Unequal society Japan) decreased from 1995 to 2005, although the decrease was not statistically significant⁶.

The odds ratio for a certain stratum is an indicator showing how more likely people from that stratum will enter the same stratum than will those from other strata. The higher the value, the less likely those from other strata will enter that particular stratum. Suppose, for example, a given society consists of two strata: the upper white-collar employee (UWCE) stratum and the stratum of all others. Let us also suppose that a table of intergenerational mobility, as shown in Table 2, was obtained from a survey. In the society represented by the table, the forty persons from the UWCE stratum all enter the same stratum, whereas none of the eighty persons from the other stratum can

⁶ The wording 'not statistically significant' as used in this context means that the hypothesis that 'the odds ratio for 1995 and that for 2005 are not the same' is rejected.

enter the UWCE stratum. This is a hypothetical status society. The possibility of persons from the UWCE stratum entering the same stratum is expressed by odds of (the number of persons from the UWCE stratum who enter the same stratum) / (the number of persons from the UWCE stratum who enter the other stratum). In this case, the odds are 40/0, or infinity. On the other hand, the possibility of those from the other stratum entering the UWCE stratum is expressed by odds of (the number of persons from the other stratum who enter the UWCE stratum) / (the number of persons from the other stratum who enter the same stratum). In Table 2, the odds are 0/80, or zero. The odds ratio for the UWCE stratum is the ratio of these two odds, which is $\infty/0$, or infinity.

Table 2 Hypothetical Status Society

		Children's strata	
		Upper white-collar employee stratum	Stratum of all others
Parents' strata	Upper white-collar	40	0
	employee stratum		
	Stratum of all others	0	80

Let us then consider a hypothetical society where anyone may be able to enter the UWCE stratum regardless of the stratum of his/her origin (Table 3). In this case, the probability of a person (whether he/she is from the UWCE stratum or from the other) entering the UWCE stratum would be 0.25 (10/40 for those from the UWCE stratum and 20/80 for those from the other stratum). In this society, the odds ratio for the UWCE stratum would be (10/30)/(20/60), i.e. 1.

Table 3 Hypothetical Equal Opportunity Society

		Children's strata	
		Upper white-collar employee stratum	Stratum of all others
Parents' strata	Upper white-collar	10	30
	employee stratum		
	Stratum of all others	20	60

Thus, the odds ratio varies from one (complete equality of opportunity) to infinity (complete inequality of opportunity). Needless to say, in the real world the level of equality of opportunity is somewhere between complete equality and complete inequality and thus the odds ratio would be somewhere between one and infinity.

Using data from the SSM Surveys conducted between 1955 and 1995, Sato (2000) formulated tables of intergenerational mobility between fathers' occupations and children's occupations at the age of forty by year of birth. Year of birth was stratified into five periods: 1896-1915 (i.e. aged 40-59 years at the 1955 survey), 1906-1925 (i.e. aged 40-59 years at the 1965 survey), 1916-1935 (i.e. aged 40-59 years at the 1975 survey), 1926-1945 (i.e. aged 40-59 years at the 1985 survey), and 1936-1955 (i.e. aged 40-59 years at the 1995 survey). In the manner described above, the odds ratio for the UWCE stratum was calculated for each birth cohort based on the intergenerational mobility table. The results showed that the odds ratio decreased between the generations born in the periods 1896-1915 and 1926-1945, whereas it increased between the generations born in the periods 1926-1945 and 1936-1955. This implies an increased exclusivity of the UWCE stratum, or that it became harder for those from the other strata to enter the UWCE stratum. However, according to a provisional calculation by Ishida and Miwa, who made the same analysis as Sato after adding the 2005 SSM Survey data (the generation born in 1946-1965), there has been no change in the level of exclusivity of the UWCE stratum. Why there has been no change is a question for future study, but at least in terms of intergenerational mobility, the inequality of opportunity has not become greater.

Next, let us look at the change in the distribution of income. Table 4 shows a comparison of the quintiles of income between 1995 and 2005. The quotient obtained by dividing the fourth quintile by the first quintile is 14.3 and 13.3 for 1995 and 2005, respectively, showing a reduction during this decade. The Gini coefficient is 0.448 and 0.437 for 1995 and 2005, respectively, also showing a reduction during the decade (although this change is not statistically significant)⁷.

⁷ The wording 'not statistically significant' as used in this context means that the hypothesis that 'the Gini coefficient for 1995 and that for 2005 are not the same' is rejected.

Table 4 Quintiles of Income
(Source: The 1995 and 2005 SSM Survey data)

	1995	2005
1st quintile	100	111.7
2nd quintile	300	223.4
3rd quintile	400	372.3
4th quintile	600	595.7

Moderately reduced income disparities have also been shown by another analysis, which is a modified version of the multiple regression analysis used in the preceding section. If, as argued by disparity society theory, the disparities have been widening, the income disparities between different employment statuses and among different occupational strata would have increased during the period between 1995 and 2005. In a multiple regression analysis, this can be expressed as follows. In the employment status, the PRC for regular employment would be greater. As shown in Formula 1, the PRC for regular employment, b_4 , indicates that regular employees' income would be $\exp(b_4)$ times as much as non-regular employees'. Therefore, the larger this PRC, the greater the difference in income between non-regular and regular employment. Similarly, as for the occupational strata, the PRCs for professional, managerial and clerical strata would be greater. On the other hand, the PRCs for skilled, semi-skilled, unskilled and farming strata were negative in 1995. If the income disparities among occupational strata have widened, the negative values would be greater (in terms of absolute value), because a greater negative PRC would mean lower income compared to the sales stratum.

In order to verify these predictions, a multiple regression analysis was conducted in the same manner as described above, using the 1995 SSM Survey data. When comparing the results of this analysis with those of the analysis of the 2005 SSM Survey data, the 1995 results show the same pattern as the 2005 survey. Income was higher for regular than non-regular employment and higher for professional, managerial, and clerical and lower for semi-skilled, unskilled, and farming, than sales.

Table 5 Results of a Multiple Regression Analysis with Logarithmic Income as the Dependent Variable
(Source: The 1995 and 2005 SSM Survey data)

	1995	2005
Age	0.008 **	0.007 **
Female	-0.894 **	-0.776 **
Employment status (reference: non-regular employment)		
Employer	1.048 **	0.830 **
Regular employment	0.840 **	0.755 **
Self-employed	0.614 **	0.310 **
Occupational strata (reference: sales)		
Professional	0.344 **	0.417 **
Managerial	0.492 **	0.452 **
Clerical	0.193 **	0.198 **
Skilled	-0.046	-0.046
Semi-skilled	-0.110 **	-0.114 **
Unskilled	-0.283 **	-0.155 **
Farming	-0.423 **	-0.058
Constant	4.935 **	5.028 **
Adjusted R^2	0.556	0.520
N	3507	3417

However, an interesting trend is found when we compare the results for 1995 with those for 2005. For all employment statuses—employer, regular employment, and self-employed—the PRCs decreased from 1995 to 2005. This indicates a reduction in the disparities between these employment statuses and non-regular employment. Particularly interesting is the reduction in the disparity between regular and non-regular employment. As for the occupational strata, the PRC for professional workers increased, while those for unskilled and farming, which are negative, decreased in terms of absolute value. This means that while the income disparity between sales and professional widened, that between sales, on one hand, and unskilled and farming, on the other, reduced.

These findings indicate that income disparities decreased on the whole from 1995 to 2005. In order to analyze these findings more precisely, a multiple regression analysis was conducted in which the PRCs for 1995 (as shown in Table 5) are fixed and which included terms representing the interaction between each explanatory variable and year of survey (1995 = 0, 2005 = 1). The sign of the PRC of an interaction term would indicate whether the disparity widened or reduced. For instance, if the PRC of the term representing the interaction between regular employment and year of survey is 0.1 and significant, this indicates that the income disparity between non-regular and regular employment increased by 0.1 from 1995 to 2005. Conversely, if the coefficient is -0.1

and significant, this means that the income disparity reduced by 0.1⁸.

Therefore, if the disparities have truly widened, the PRCs for the terms representing the interaction between the employment statuses of employer, regular employment, and self-employed, on one hand, and year of survey, on the other, should be positive and significant. As for the occupational strata, the PRCs for the terms representing the interaction between professional, managerial, and clerical, on one hand, and year of survey, on the other, should be positive and significant, whereas those for the terms representing the interaction between skilled, semi-skilled, unskilled, and farming, on one hand, and year of survey, on the other, should be negative and significant. Results of this regression analysis are shown in Table 6. They are considerably different from the predictions described above. With respect to employment status, the PRCs for the terms representing the interaction between employer, regular employment, and self-employed, on one hand, and year of survey, on the other, are all negative and significant. This indicates a reduction in the disparities between the statuses of employer, regular employment, and self-employed, on one hand, and that of non-regular employment, on the other. As for the occupational strata, the PRC for the term representing the interaction between professional and year of survey is positive and significant, which is consistent with the above prediction. However, the PRCs for the terms representing the interaction between unskilled and farming, on one hand, and year of survey, on the other are also positive and significant. This indicates a reduction in the disparities between these occupations and sales. The PRCs for the terms representing the interaction between the occupations other than professional, unskilled, and farming, on one hand, and year of survey, on the other, are not significant. The PRC for the term representing the interaction between female dummy and year of survey is positive and significant, which indicates a reduction in the disparity between men and women.

⁸ To put it more precisely, a significant PRC of 0.1 for the term representing the interaction between regular employment and year of survey would mean the following: since the PRC for regular employment in 1995 is 0.840, which means that regular employees' income was $\exp(0.840)$ times (i.e. 2.32 times) as much as non-regular employees' in 1995, the level of disparity for 2005 would be $\exp(0.840 + 0.1)$, or 2.56 times in favor of regular employees. A PRC of -0.1 for the same term as above would mean that the disparity reduced to $\exp(0.840-0.1)$, or 2.10 times in favor of regular employees.

Table 6 Results of a Multiple Regression Analysis with the Partial Regression Coefficients Fixed for 1995 and Logarithmic Income as the Dependent Variable (Source: The 1995 and 2005 SSM Survey data)

Age	0.008 **
Female	-0.894 **
Employment status (reference: non-regular employment)	
Employer	1.048 **
Regular employment	0.840 **
Self-employed	0.614 **
Occupational strata (reference: sales)	
Professional	0.344 **
Managerial	0.492 **
Clerical	0.193 **
Skilled	-0.046
Semi-skilled	-0.110 **
Unskilled	-0.283 **
Farming	-0.423 **
Age x year of survey	-0.001
Female x year of survey	0.132 **
Employer x year of survey	-0.203 **
Regular employment x year of survey	-0.063 *
Self-employed x year of survey	-0.289 **
Professional x year of survey	0.094 *
Managerial x year of survey	-0.026
Clerical x year of survey	0.027
Skilled x year of survey	0.023
Semi-skilled x year of survey	0.018
Unskilled x year of survey	0.148 **
Farming x year of survey	0.377 **
Constant	4.938 **
<i>N</i>	6924

Figure 3 presents these results in a more readily understandable manner. The vertical axis represents PRC values. The results have been adjusted so that the results for the reference categories used in the multiple regression analysis (male, non-regular employment, and sales) are shown at level zero. The horizontal axis represents years 1995 and 2005. For coefficients larger than zero (the reference level), a sloped line falling from left to right and that rising from left to right indicate a reduction and widening, respectively, of the disparity. For coefficients smaller than zero, a sloped line rising from left to right and that falling from left to right indicate a reduction and widening, respectively, of the disparity. It is obvious that the income disparities decreased for all categories except professional. Thus, we can conclude that the income disparities have not necessarily widened; in fact, they have reduced on the whole.

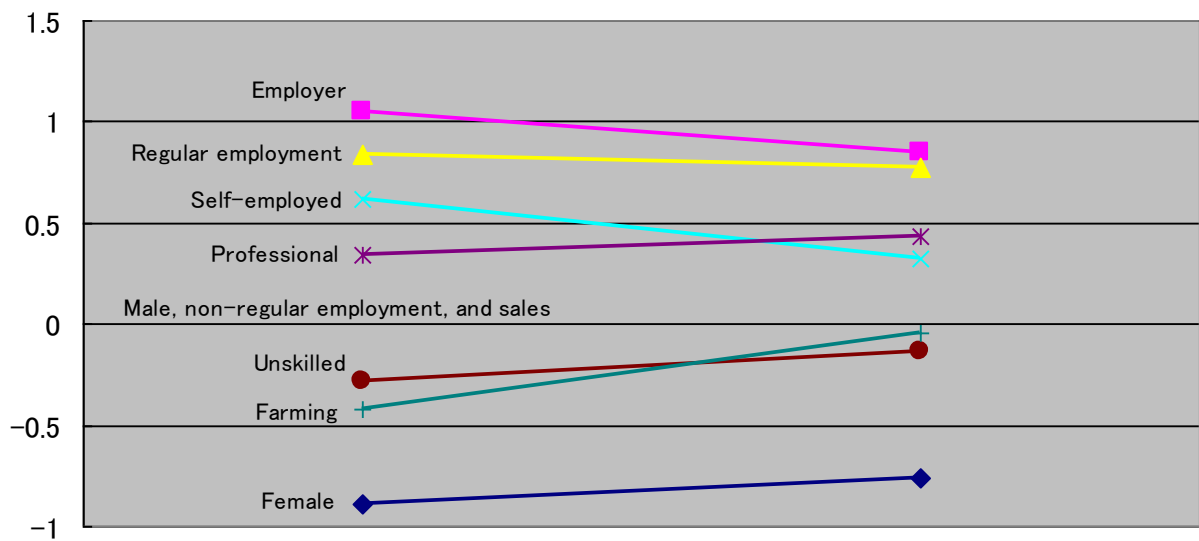


Figure 3 Changes in Partial Regression Coefficients between the Two Survey Years
 Source: The 1995 and 2005 SSM Survey data

7 Toward More Fruitful Dialogue

Disparity society theory raised some important issues that had been overlooked by social stratification theory. In particular, the income disparity between non-regular and regular employment was a blind spot that had been generally overlooked by conventional social stratification theory. In an attempt to reflect on this failure, this paper reconfirmed this argument presented by disparity society theory using the SSM Survey data. However, the other argument that the disparities have been widening was not supported. Certainly, one may speculate that this conclusion is attributable in part to the particular feature of the SSM Survey whose data on the wealthy and poor people are relatively limited. However, this characteristic is present in both 1995 and 2005 SSM Survey data, and it does not necessarily seem to be the cause for the failure to support the alleged widening of disparities. Another point to note is that the analysis conducted in this paper covers the working population only and excludes the unemployed. While the present analysis has focused on the income disparity between regular and non-regular employment, it must be conceded that this paper has failed to examine the disparity between the employed and the unemployed.

Needless to say, I have no intention to claim that the SSM Survey data covers all social phenomena concerning social stratification and inequalities in contemporary Japan.

Still, I believe that the results of the analysis conducted here will corroborate the stated reduction in the income disparities. Researchers supporting disparity society theory may argue against this conclusion, but I am sure that continuous dialogue on this and a number of other topics will open doors for new studies.

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